Model T700 Dynamic Dilution Calibrator

The Model T700 is a microprocessor based calibrator for precision gas analyzers. Using highly accurate mass flow controllers combined with compressed sources of standard gases, calibration standards are provided for multipoint span and zero calibrations using up to 4 gas sources.

The Model T700 can be equipped with an optional UV ozone generator for accurate, dependable ozone calibrations, and to enable production of NO_2 when blended with NO gas in the included, internal gas phase titration (GPT) chamber. An optional photometer allows even more precise control of the ozone generator giving accurate and dependable ozone calibrations and enhanced GPTs. To ensure the highest accuracy of NO_2 output, the T700 with the photometer option can measure the ozone concentration prior to performing a GPT. A nearly unlimited number of calibration sequences may be programmed into the non-volatile memory of the Model T700, covering time periods up to a year.

All T Series instruments offer an advanced color display, capacitive touch screen, intuitive user interface, flexible I/O, and built-in data acquisition capability.   All instrument set up, control and access to stored data and diagnostic information is available through the front panel, or via RS232, Ethernet, or USB com ports either locally or by remote connection using the included APIcom™ software.

- ▸ **Generates precise calibration gases for SO_2, H_2S, NO, NO_2, CO, O_3, and others**
- ▸ **Large, vivid, and durable color graphics display with touch screen interface**
- ▸ **Ethernet, RS-232, and (optional) USB com ports**
- ▸ **Front panel USB connections for peripheral devices and firmware upgrades**
- ▸ **12 independent timers for sequences**
- ▸ **Nested sequences (up to 5 levels)**
- ▸ **Software linearization of mass flow controllers (MFC)**
- ▸ **4 calibration ports (configurable for single or multi-blend gases)**
- ▸ **3rd MFC for wide dynamic range (optional)**
- ▸ **Gas phase titration chamber (GPT) (optional)**
- ▸ **Ozone generator and photometer allow use as a primary or transfer standard (optional)**
- ▸ **Inlets for external ozone reference sources**
- ▸ **Two-year warranty**

Free Customer Support by telephone and email for the life of the instrument

Specifications

Dilution System

Flow Measurement Accuracy:	± 1% of full scale
Repeatability of Flow Control:	± 0.2% full scale
Linearity of Flow Measurements:	± 0.5% full scale
Flow Range of Dilution Air:	0 to 10 SLPM
Optional Ranges:	0 to 20 SLPM, 0 to 5 SLPM
Flow Range of Cylinder Gases:	0 to 100 cc/min
Optional Ranges:	0 to 50 cc/min, 0 to 200 cc/min
Zero Air Requirements:	10 SLPM @ 30 psi
Optional:	20 SLPM @ 30 psi
Input Pressure:	20-40 psig
Calibration Gas Input Ports:	4 (configurable)
Diluent Gas Input Ports:	1

Ozone Generator Module

Maximum Output:	6 ppm LPM
Minimum Output:	100 ppb LPM
Response Time:	180 seconds to 98%
Optical Feedback:	Standard
Stability (7 days):	1% with photometer option
	3% without photometer option
Linearity:	1% with photometer option
	3% without photometer option

UV Photometer Option

Range:	0-100 ppb to 0-10 ppm (selectable)
Precision:	1.0 ppb
Linearity:	1.0% of reading
Rise/Fall Time:	<20 seconds (photometer response)
Response Time:	180 seconds to 95% (system response)
Zero Drift:	< 1.0 ppb/24 hours
Span Drift:	< 1%/24 hours

Electrical Specifications

Power Requirements:	85V-264V, 47Hz-63Hz
Analog Output Ranges (Test Channel):	10V, 5V, 1V, 0.1V (selectable)

Communication Specifications

Included I/O:	1 x Ethernet: 10/100Base-T
	2 x RS232 (300-115,200 baud)
	2 x USB device ports
	8 x digital control outputs
	12 x digital control inputs
	8 x digital status outputs
Optional I/O:	1 x USB com port
	1 x RS485
	Multidrop RS232

Physical Specifications

Operating Temperature Range:	5 - 40°C
Dimensions (HxWxD):	7" x 17" x 24" (178 x 432 x 609 mm)
Weight:	31 lbs (14.06 kg)
	39.2 lbs (17.78 kg) with photometer, GPT, and O_3 generator

The values expressed above are in accordance with EPA definitions.
All error specifications are based on constant conditions.
Specifications subject to change without notice.
Printed documents are uncontrolled. SAL000062B (DCN 5880) T700/10.13.10

How to Order

Model T700 includes:

☐ Two year warranty
☐ 4 calibration gas inlet ports
☐ 1 diluent gas inlet port
☐ 8 digital control outputs
☐ 12 digital control inputs
☐ 8 digital status outputs
☐ RS-232 ports
☐ Ethernet port
☐ USB ports for peripheral devices
☐ APIcom^{TM} remote control software
☐ Select AC input voltage

   ☐ 100V - 120V ☐ 50Hz
   ☐ 220V - 240V ☐ 60Hz

☐ Select DC output voltage

   ☐ 10V   ☐ 5V
   ☐ 1V   ☐ 0.1V

Mounting Options:

☐ Rack mount brackets with chassis slides
☐ Rack mount brackets only
☐ Handle

I/O Options:

☐ USB com port
☐ Multi-drop RS232
☐ RS485
☐ 12V external valve driver
☐ 24V external valve driver

Other Options:

☐ O_3 generator with optical feedback and GPT mixing chamber
☐ UV photometer module
☐ NO_y output valve
☐ Photometer certifications
☐ Expendables kit

For more information about the Teledyne API family of monitoring instrumentation products, call us or visit our website at

www.teledyne-api.com